

CLAIMS

I Claim

1. An anti-roll suspension for a vehicle chassis having at least two laterally spaced wheels, the suspension comprising:
 - an axle assembly for rotatably mounting each of a pair of laterally spaced wheels;
 - a spring assembly supporting the chassis on each of the axle assemblies;
 - a moveable arm connected between the spring assembly and the chassis; and
 - an anti roll linkage connected to said chassis and to said moveable arm, and structured to translate lateral movement of the chassis to vertical movement of said moveable arm to the spring on the down force side of the chassis so that the anti roll linkage simultaneously lifts the down force side of the chassis and lowers the up force side of the vehicle.
2. An anti-roll suspension according to claim 1 wherein said moveable arm comprises a bell crank for pivotal mounting to a vehicle chassis having one arm connected to one end of said spring assembly, and another arm connected to a compensating link receiving and translating said lateral movement.
3. An anti-roll suspension according to claim 2 wherein said compensating link is connected to at least one of said axle assemblies.
4. An anti-roll suspension according to claim 2 wherein said spring is a coil compression spring normally disposed in a substantially vertical orientation.

5. An anti-roll suspension according to claim 4 wherein said axle assemblies
2 are embodied on opposite ends of an elongated rigid axle wherein said second link is
connected to a lower portion of said spring assembly.

6. An anti-roll suspension according to claim 5 wherein said compensating
2 link is connected at one end to said axle.

7. An anti-roll suspension according to claim 6 wherein:
2 said compensating link is connected at one end to one axle assembly; and
a tie link is connected between arms of said lever of each suspension assembly.

8. An anti-roll suspension according to claim 5 wherein each suspension
2 assembly includes one said compensating link connected at one end to said axle
assembly.

9. An anti-roll suspension according to claim 3 wherein:
2 said axle assemblies are steerable; and
each suspension assembly includes a bell crank mounted on the chassis and one
4 said compensating link connected at one end to said bell crank.

10. An anti-roll suspension according to claim 9 wherein each of said axle
2 assemblies are independently supported on said chassis.

11. An anti-roll suspension according to claim 10 wherein each of said spring
2 assemblies embodies a McPherson strut.

12. An anti-roll suspension according to claim 3 wherein each of said spring
2 assemblies embodies a McPherson strut.

10033288 122501

10033288-102601

13. An anti-roll suspension system for a vehicle chassis having at least two
2 laterally spaced front wheels and two laterally spaced rear wheels, the suspension
comprising:
4 an axle assembly for mounting each of a pair of laterally spaced front wheels;
an axle assembly for mounting each of a pair of laterally spaced rear wheels
6 wheels;
a spring assembly for mounting each of the axle assemblies to the chassis;
8 a moveable arm connected between each spring assembly and the chassis; and
an anti roll linkage connected to said chassis and to said moveable arm, and said
10 anti roll linkage structured to translate a lateral movement of the chassis to a vertical
downward movement of said moveable arm to the spring on the down force side of the
12 chassis and a vertical upward movement of said moveable arm to the spring on the up
force side of the chassis so that the anti roll linkage simultaneously lifts the down force
14 side of the chassis and lowers the up force side of the vehicle.

14. An anti-roll suspension system according to claim 13 wherein said
2 moveable arm comprises a bell crank for pivotal mounting to a vehicle chassis, the bell
crank having one arm connected to one end of said spring assembly, and another arm
4 connected to a compensating link receiving and translating said lateral movement.

15. An anti-roll suspension according to claim 14 wherein said compensating
2 link is connected to at least one of said axle assemblies.

16. An anti-roll suspension according to claim 15 wherein said spring is a coil
4 compression spring normally disposed in a substantially vertical orientation

17. An anti-roll suspension according to claim 16 wherein each of said axle
2 assemblies are independently supported on said chassis.

18. An anti-roll suspension according to claim 17 wherein each of said spring
2 assemblies embodies a McPherson strut.

19. An anti-roll suspension according to claim 15 wherein each of said spring
2 assemblies embodies a McPherson strut.

20. An anti-roll suspension according to claim 19 wherein:
2 said anti roll linkage is interconnected to between said front wheels by a tie link;
and
4 a steering box for said front wheels is mounted on said tie link.

10033288-122601